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Notes on Carex.—II.

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CAREX STRICTA, *Lamarck.*

One of the most remarkable instances of the general acceptance of an early error occurs in the case of *Carex stricta*. Among all caricographers, so far as I know (unless it be Carey in Gray's Manual), *C. stricta* of Goodenough (Obs. on Brit. Carices, p. 196) has held the preference over *C. stricta* of Lamarck (Dict. de Bot. 3, 387) on account of its supposed priority. Dr. Boott did not confidently adopt Lamarck's name as a synonym of his *C. angustata*; nor was it necessary that he should pay much attention to the name, as he evidently regarded it as more recent than *C. stricta*, Gooden. Sir J. E. Smith, in Rees' Cyclopaedia, taking Goodenough's name to be the older, proposed *C. Virginiana* for the plant of Lamarck. Otto von Boeckeler, in Linnæa, 40, 430, adopts Smith's name. Goodenough's name was made in 1792; Lamarck's in 1789. *C. stricta*, Lam., therefore becomes the proper name of the American plant, and the *C. stricta* of Gooden., a European species, must bear some other name. There can be no doubt that Lamarck meant to describe the same plant intended in Dr. Boott's *C. angustata*. His characters can apply to no other Virginian species, unless it be *C. aperta*, Boott, which was separated from the original species at a later day. Sir J. E. Smith reproduces Lamarck's characters and description and, evidently having seen more specimens, adds somewhat to the description. His account of the species, from the American edition of Rees' Cyclopaedia, vii, species 100, is as follows:

"*C. Virginiana* (*C. stricta*, Lam.). 'Female spikes two, sessile, erect, with male flowers at the top; male terminal, remote; stem naked.' Stem about a foot high, slender, compressed above, triangular below, rough. Leaves as long as the stem, near two lines

broad, striated. Male spike terminal, an inch long; glumes obtuse, brown, with a white edge. Female spikes distant from the male, sessile, upright, linear, pressed close, reddish brown, with some male flowers at the top; lower one with a bracteal leaf as long as the spike. A native of Virginia, Pennsylvania, etc., described by Lamarck from a dried specimen."

C. xerocarpa, S. H. Wright, Sill. Journ. Sec. Ser. xlii, 334, *C. angustata* var. *xerocarpa*, Bailey, Carex Cat., is simply an attenuated form of *C. stricta*, and it has no characters to separate it from the species. I find it growing from the same tussocks with the ordinary form. Occasionally the inflorescence is reduced to one androgynous spike. *C. Virginiana* var. *elongata*, Bklr., Linnaea, 40, 432, appears from the description to be a very large form of the same.

The synonymy of the species may be arranged as follows:

C. stricta, Lam., Dict. de Bot. iii, 387 (1789).

C. Virginiana, Smith, Rees' Cycl. vii, sp. 100.

C. acuta, Muhl., Descript. Gram. 263; Torr., etc.

C. stricta, Dewey, Sill. Journ. x, 269; Torr., etc.

C. angustata, Boott, Hook. Fl. Bor. Am. ii, 218.

C. strictior, Dewey, Wood's Cl. Bk. 755.

C. xerocarpa, S. H. Wright, Sill. Journ. Sec. Ser. xlii, 334.

C. aperta, Boott, is perhaps too near *C. stricta*. The reticulated fibres of the lower sheaths of the latter species is the readiest distinction between the two. Careless collectors often fail to secure the lower sheaths, or the fibres are destroyed in pulling up the specimens. Occasional plants will be found in which this character is normally obscure, however. *C. aperta* commonly has shorter spikes than *C. stricta*, and sharper and more spreading scales.

CAREX LIDDONI AND C. ADUSTA.

Carex Liddoni has never been well understood. The species was founded upon a plant collected on the Columbia river by Scouler. Its author regarded it as a near ally of *C. arida*, Schw. and Torr., and expressed a doubt of its distinctness from that species. A subsequent knowledge of the species has definitely separated it from *C. arida*, and has allied it to the apparently far different *C. adusta*. The form of the perigynium is widely different in typical specimens of each species, but it varies much in the intermediate forms. Except in the var. *minor* of *C. adusta*, the ovate or orbicular form of the perigynium readily distinguishes *C. adusta* from the lanceolate-fruited *C. Liddoni*. The most distinctive difference between the two, however, lies in the

colors of their spikes: *C. Liddoni* is always fuscous or fulvous; *C. adusta* is pale or silvery tawny. The following characters will, I think, distinguish the two species:

C. LIDDONI, Boott in Hook. Fl. Bor. Am. ii, 214. Culm erect or nearly so; spikes 3-6, obovoid or oblong, erect, chaffy at the base, fulvous, contiguous or loosely aggregated into an oblong head (about 1' long); perigynium greenish or tawny, firm in texture, lanceolate (4"-6" long), thrice as long as the elliptic, brown achenium, few nerved when mature, rough on the narrowly winged margins, very gradually beaked, about the length of the acute, thin-margined scale. *C. adusta*, var. *congesta*, W. Boott, Bot. Calif. ii, 238.—Mostly at high altitudes, California and northward, eastward to South Park, Colorado, (*John Wolfe*) and Montana, (*F. L. Scribner, 1883*); said to occur on Mt. Graham, Arizona.

C. ADUSTA, Boott, l. c. Top of the culm often inclined or somewhat nodding; spikes 6-12, globose, pale or silvery-tawny, mostly not contiguous, the lower often somewhat compound; perigynium pale or silvery, fragile in texture, ovate or almost orbicular, about twice the length of the oval, mostly dark and shining achenium, strongly many-nerved, minutely serrate above on the broadly winged margins, rather abruptly beaked, about the length and usually rather broader than the scale. *C. argyrantha*, Tuckerm. *C. albolutescens*, Schw., var. *argyrantha*, Olney Exsicc. *C. adusta* var. *argyrantha*, Bailey, Carex Cat. *C. albolutescens* var. *sparsiflora*, Olney, l. c. (not 591 Hall's Oregon Coll.) *C. adusta* var., Bailey l. c.—Northeastern States, British America, California.

VAR. GLOMERATA, Bailey l. c. Spikes few flowered, aggregated into a loose, mostly tawny head; perigynium large, almost wingless, nearly filled by the large, dark achenium. *C. albolutescens* var. *glomerata*, Olney l. c.—Mt. Desert Id., Me., (*R. W. Greenleaf*), New Brunswick (*Rev. J. Fowler*), and from the Saskatchewan region (*Herb. Gray*).

VAR. MINOR, Boott, l. c. Culm 6'-16' high, very slender towards the top, weak and nodding at maturity, erect when young; leaves narrow, very long pointed; spikes all silvery-brown, the lower rather remote, long-attenuated at the base; perigynium ovate-lanceolate, nearly nerveless. *C. pratensis*, Drejer, Rev. Crit. Car. Bor. 24. *C. adusta*, W. Boott, Wheeler's Rep. 277.—South Park, Colorado (*John Wolfe*), British America, northward to Greenland, eastward to Labrador. Probably a good species.

C. albolutescens var. *brunnea*, Olney, Hall's Oregon Coll. No. 590, *C. adusta* var. *brunnea*, Bailey l. c., is *C. leporina* L.

CAREX PYRENAICA AND C. NIGRICANS.

These species have fewer distinguishing characters than were given them by Meyer and Boott. In the Rocky Mountains the species run very close together. Although Dr. Boott regarded "perigyniis ventricosis, majoribus, ore conspicue albo-hyalino aperto" as good characters to distinguish *C. nigricans* from *C. Pyrenaica*, the forms of the perigynium in our specimens furnish no constant differences. They differ as follows:

C. PYRENAICA, Wahl., Act. 139. Two to eight inches high, slender; leaves narrow, mostly involute-filiform, shorter than the culms; staminate flowers few, occupying a third or less the length of the spike; perigynium few-nerved or nerveless, usually shining, little longer than the dark brown or purple scale; spike brown or purple, the fertile flowers erect until full maturity.—High mountains of Colorado to California and northward.

C. NIGRICANS, C. A. Meyer, Cyp. Nov. 211. Stouter; leaves a line or more broad, nearly flat; staminate flowers usually conspicuous, occupying about half the spike; perigynium somewhat ventricose, dull; otherwise as in the last, with which it grows. Evidently the more common species.

SYNONYMY.

Carex Parryana, Dewey, includes *C. Hallii*, Olney, Hayden's Rep., 1871, 496. In the Preliminary Catalogue of Lieut. Wheeler's Survey, Mr. Olney noticed the identity of the two species.

C. Douglasii, Boott, includes *C. Fendleriana*, Bcklr., Linnaea, 39, 135 (878 Fendler).

C. rupestris, All., includes var. *Drummondiana*, Bailey Carex Cat., (*C. Drummondiana*, Dewey). The British American plant has been thought to differ from the species in its greater size, longer spikes more attenuated at the base, and more obtuse scales. Specimens from the Pyrenees and from Greenland are exactly like the large forms from British America.

HABITATS.

C. Careyana is credited to Oregon in the Carex Catalogue on the authority of specimens so named in Hall's collection. The specimens are *C. laxiflora* var. *plantaginea*.

C. acutiformis, Ehrh., (*C. paludosa*, Gooden.) was credited to Colorado by Olney, on a plant of King's Survey, too young to be determined. This species is well established at Savin Hill, near Boston, where I have this year collected it.

Mr. Thomas Howell has this year found *Carex cinnamomea*, Olney, at Grave Creek, Southwestern Oregon. This is the second known locality for the species. It was first found by Bolander (No. 6477) on the Red Mountains, Mendocino county, Cal. In some of the specimens the perigynium is minutely pubescent above the middle. The pubescence is evidently deciduous with age.

CARICES UNKNOWN TO AMERICA.

In the Preliminary Catalogue of the Plants of Lieut. Wheeler's Expedition (1874), Mr. Olney introduced the following exotic species upon specimens collected by the survey:

C. lævirostris, Blytt and Fries, upon a specimen of *C. utriculata*, Boott. (No. 1068.)

C. turfosa, Fries, upon *C. vulgaris*, Fries. (No. 1039.)

"*C. personata*, Fries," upon *C. aquatilis*, Wahl., var. *sphagnophila*, Fries. (Nos. 1037 and 1038) Mr. Olney probably referred to *C. acuta*, L., var. *personata*, Fries.

C. alpina, Swartz, var. *nigrescens*, Anderss., upon *C. alpina*, (No. 1044.) The form referred to Andersson's variety will not fall under the character "spicis omnibus sessilibus, atrofuscis; pumila, rigidula,"—*Anderss. Cyp. Scand.*

C. sempervirens, Vill.? *Carex* Cat., is *C. frigida*, All.

C. obesa, All., is represented in this country only by its var. *minor*, Boott.

On a New *Mimulus* of a Peculiar Section of the Genus.

BY J. G. LEMMON.

Mimulus Mohavensis is the name under which I sent specimens of this interesting little plant to Prof. Gray. It is so peculiar that he was at first disposed to regard it as a new genus. But as a related species afterwards received from another source appeared to invalidate the characters relied on, he accepted the view which I had taken of it, and drew up the following character of a new section of the genus, which was needed for its reception:

"§ MIMULASTRUM. Corolla with cylindrical tube and throat included in the turgid 5-angled unequally toothed calyx, gibbous anteriorly near the base; the orifice contracted; limb rotate, refracted, almost regularly 5 cleft; lobes flabelliform-dilated, similar, except that the two posterior are slightly smaller. Character and habit of section *Eunanus*, except in the capsule, the submembranaceous valves of which are placentiferous."